Attachment 1

CABLE NETWORKS: BUNDLING, UNBUNDLING, AND THE COSTS OF INTERVENTION

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Cable Networks: Bundling, Unbundling, and the Costs of Intervention

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Summary

Congress has asked the Commission to respond to a series of questions regarding the manner in which programming is sold to cable operators and direct broadcast satellite systems (collectively, "MVPDs") and to subscribers. The questions focus on the economic and legal impact of possible changes in the way programming is sold, to be mandated by law or regulation. These possibilities include requiring suppliers[1] to license their cable networks to MVPDs individually (à la carte), rather than as bundles;[2] requiring suppliers to permit MVPDs to resell cable networks either à la carte or as part of a theme tier; mandating à la carte pricing; mandating theme tiers; and mandating a "family tier." In order to help prepare its response to Congress, the Commission issued a Public Notice seeking

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1 Throughout the paper, network refers to a specific "cable" network, such as Nickelodeon or CNN, marketed to MVPDs, whereas supplier refers to the entity that owns a network or group of networks, such as Viacom or Time Warner.

2 We use the terms "unbundled" and "à la carte" synonymously herein.

comment on factual questions regarding the provision of à la carte and theme tier services by MVPDs.[3]

Viacom asked us to provide economic analysis of certain issues raised by the various proposals. Specifically, we address the following issues:

- Do upstream suppliers of scheduled program services ("cable networks") licensing to MVPDs require MVPDs to purchase bundles of cable networks rather than offering program services individually?
- Is the MVPD practice of offering bundles or tiers of services to retail subscribers harmful to consumers? What would be the effect on cable networks and consumers of a regulation requiring MVPDs to offer programming à la carte, with or without continued bundling?

We address these issues factually where time and available data permit, and in any case conceptually. Our conclusions, briefly, are as follows:

1. Bundling is an extremely common phenomenon in the American economy. Indeed, it is more the rule than the exception. Bundling presents no presumptive threat to consumer welfare. In fact, bundling generally promotes consumer welfare by lowering the prices of goods and services. Whether and how to bundle components is an important aspect of the competitive strategies of individual firms. In general, an external regulatory constraint making bundling unlawful will reduce welfare by increasing costs. This is true whether or not sellers have market power. While a

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[3] FCC, "Comment Requested on À La Carte and Themed Tier Programming and Pricing Options for Programming Distribution on Cable Television and Direct Broadcast Satellite Systems," MB Docket No. 04-207, May 25, 2004 (hereinafter "Public Notice").

regulatory intervention restricting bundling is likely to reduce overall welfare, it may increase the welfare of those consumers who prefer highly customized services, but at the expense of consumers who prefer highly bundled services. There is no basis to predict that any consumers who may be better off have a special claim on society, such as poverty or geographic isolation. Thus, giving each consumer equal weight, consumers as a group will be worse off if bundling is not permitted.

2. Our empirical research contradicts the idea that suppliers generally require MVPDs to purchase bundles of programming. The cable network industry is competitive. MVPDs have many sources of programming and can vary the proportions in which they buy programming.[4] Entry into the business of providing programming to MVPDs is not restricted, as evidenced by the actual entry of more than 200 new networks in the past decade.[5] Suppliers of cable networks may well offer bundles of networks to MVPDs, but they must offer a price for the bundle that is no greater than the sum of the competitive prices of the individual networks, compensating their customers for taking low-value networks by, in effect, lowering the price of their most popular networks. In any event, the evidence is that cable networks are not systematically purchased by MVPDs as bundles. For example, a large percentage of 2,455 cable systems studied do *not* carry all the networks offered by leading suppliers such as Time Warner, Discovery, Dis-

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[4] One piece of evidence attesting to the increasing competitiveness and efficiency of wholesale suppliers of programming has been the decline in the extent of vertical integration in the industry. See FCC, Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Tenth Annual Report, MB Docket No. 03-172, 2004, Table 8.

[5] Id.

ney and Viacom. These data also show that suppliers license their networks in many different combinations and on a stand-alone basis.

3. Our economic analysis of the competitive forces on cable networks leads us to predict that suppliers would offer MVPDs a substantially lower price in exchange for placing any network on a tier that matches that network's national marketing strategy. Cable networks generally must adopt a particular marketing strategy in order to survive competitively. One important choice is whether to offer "premium" programming supported solely by subscription license fees or "basic" programming, supported by advertising and license fees. There are advantages if the strategy is uniform across markets for any given network, chiefly because the different strategies call for different program qualities, but also because customized marketing is more expensive than national marketing. Therefore, cable networks will prefer a particular tier placement, and will likely offer a better price to MVPDs who agree to that placement.

4. Prices cannot be ignored. Neither the issue of whether MVPDs are required to buy bundles of programs nor the issue of whether they are required to place certain cable networks on certain tiers can be addressed in the absence of price comparisons. To understand this, consider whether a shopper who is offered a quantity discount for laundry soap, for example, is *required* to buy a larger quantity. Assuming for the sake of argument, and contrary to common sense, that the answer is yes, requiring the soap powder to be "unbundled" is no solution unless the government is prepared to regulate both the sizes of the components and their prices.

5. The last point is especially important. It is very difficult to imagine an effective law or regulation requiring unbundling of MVPD networks, either

at wholesale or retail, that was not accompanied by government regulation of the prices and license fees and other terms of trade between cable networks and MVPDs and between MVPDs and retail subscribers. Such regulation would be far more complex than the Commission's attempts to regulate the prices of unbundled elements of local telephone service.

6. We examine the limited empirical evidence bearing on the effect of mandated unbundling on specific cable network à la carte retail prices. Making a series of assumptions, and not attempting to account for certain important but unknowable factors, we offer a rough empirical basis for predicting the effects of mandated unbundling of particular cable networks at the retail level. We find that at the mid-point of the ranges considered the average cost per subscriber (exclusive of the basic tier fee and converter box fee) for ten à la carte networks would be $44.60. These calculations, summarized in Table 4, strongly suggest that consumers will end up paying substantially more than they do now for the present collection of cable networks or for any substantial subset of networks. Consumers who wish to subscribe only to a very few of the existing networks, including consumers who currently do not subscribe to any expanded tier, may be better off. However, these are short-term "partial equilibrium" predictions. In the longer term, there is no assurance that the networks such consumers prefer will survive the change, or, if they do, that they will retain their current levels of program quality.

7. Unbundling clearly will increase the costs to viewers of sampling content on cable networks they do not regularly watch. This provides a firm basis to predict that the effect of the proposed interventions would be to impair

the ease of access of all Americans to new ideas and contrary and minority viewpoints.

8. We consider, last, the proposal to mandate certain bundles of content organized according to specified themes. An example is the proposal for a "family tier." Based on the analysis in Section V, we conclude that consumers who subscribed only to such a bundle would pay as much or more than they do now, and that some or all of the networks that they currently receive might no longer exist. Moreover, unbundling only a few specific networks might not reduce the price of the remaining bundle of networks. Further, for reasons explained in Section VI, we think that overall consumer welfare would be adversely affected by mandated unbundling or tiering, and that it would raise substantial First Amendment issues.

I. Introduction

The task before the Commission in responding to the Congressional inquiry is extraordinarily difficult and complex. To illustrate the difficulty, consider the proposal to require MVPDs to offer all cable networks à la carte, either as the only alternative or in combination with various tiers.

Many cable networks are dependent upon a dual revenue stream, consisting of advertising revenues and subscriber fees. It is reasonable to expect that, if a cable network were taken out of the basic or expanded basic bundle and instead offered à la carte, it would lose subscribers. A reduction in subscribership, holding subscriber license fees and advertising rates constant, would reduce revenues in both these categories.

In addition to these revenue losses, if a cable network were taken off a tier and offered à la carte it would incur additional transactional marketing and associated costs. Transactional marketing consists of tactics, activities and resources designed to generate subscriptions to an à la carte network by stimulating consumer demand and influencing consumer choice. A cable network offered to consumers à la carte would face these additional marketing costs in order to overcome the higher search and transactions costs faced by potential viewers. The network would have to compete with dozens, if not hundreds, of other networks for the consumer's dollar.

There are many factors to consider in assessing an à la carte regime. How will suppliers of cable networks respond? How will MVPDs respond? How will consumers respond? How will providers of inputs, such as rights holders, respond? How will competitive interactions among networks change? All of these factors and their interactions affect what will happen to subscriber rates for cable

programming under an à la carte regime. One cannot confidently predict all the specific long-run changes that would result from restricting the way cable programming is sold. Bundling of cable networks is part of a complex system of related economic decisions that involve program quality and marketing as well as pricing.

Section V below describes our empirically-based effort to predict the effects of unbundling on the weighted average network price. Such predictions necessarily cannot account for certain important but immeasurable factors, such as consumer demand for individual networks and future competitive interactions among cable networks and MVPDs. Predicting what will eventually happen, to what extent, and to which cable networks, is immensely complicated by the fact that a rule requiring a change in marketing practices would affect all MVPDs, nearly all program suppliers and nearly all networks. While one might hope to model the behavior of any one cable network holding the behavior of other networks constant, changes of the magnitude proposed would clearly throw the entire industry into a period of disruption and disequilibrium. It is beyond this paper's scope to model and describe with certainty the duration of this period of disruption, the likely new industry equilibrium, if any exists, much less the path the industry would follow, during a period of uncertain duration, to arrive at such an equilibrium. Nevertheless, the lost advertising revenues and higher costs associated with à la carte pricing are likely to persist in the long run, and to result in a permanent reduction in aggregate welfare.[6]

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[6] We think it likely that the proposed interventions would reduce the size of the economic pie available to be shared by all consumers. However, despite the smaller overall pie, some consumers may be better off as measured by their surplus from consumption of MVPD services. When we predict reductions in overall welfare we are implicitly giving equal weight to each consumer. This assumption is justified by the absence of any apparent correlation between

Although predictions regarding specific networks are difficult, some generalizations are possible. Clearly, any loss of subscriber or advertising revenue and any increase in costs would in the first instance increase consumers' per-network subscription prices, reduce program quality, cause the exit of some networks, and limit the entry of new networks. Hence, the change in pricing would reduce the variety and breadth of programming offered to subscribers. Moreover, it would reduce what a cable network is willing to pay for both original and syndicated off-network programming, reducing the quality of cable programming offered to subscribers as well as the quality of certain types of broadcast network programming.[7] Also reduced would be the revenues earned by certain program inputs with possible further reductions in the quantity and quality of their output. All of these effects will serve to reduce consumer welfare. Subsequently, competitive interactions would take place among cable networks and among MVPDs, further complicating one's ability to predict specific effects.

The uncertainty of impacts on specific consumers and suppliers within this overall picture is itself a strong argument against requiring programmers and MVPD systems to make such a drastic change. Regulatory interventions, once instituted, are difficult to reverse.

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those likely to benefit from unbundling and the characteristics traditionally associated with unequal weighting of income. In this respect mandatory unbundling resembles an economically inefficient tax that transfers income from one randomly selected group of consumers to another, reducing GNP in the process.

[7] Part of the cost of certain types of broadcast network programming is recouped from sale of the programming into syndication. If syndication revenues, such as payments from cable networks, are decreased, creators of broadcast programming will have to reduce production costs, and quality, of new broadcast network programming.

Another consequence of required à la carte pricing is predictable in direction if not in magnitude. That consequence would be a reduction in the opportunity of American households to be exposed to different points of view and new ideas. To see how this would come about, consider the difference between the way in which MVPDs currently provide networks (i.e., bundled) and the way that magazine publishers offer subscriptions (i.e., à la carte). Many consumers today can sample or "surf" across the various video options available to them, deciding to settle on a particular network based on the attractiveness of a quick sample of the programming. This facilitates the opportunity for content suppliers to compete for viewer attention across disparate sources and genres.

In contrast, the subscription model used by the magazine industry (or, for that matter, by premium movie and sports networks) does not permit such easy "surfing." A given consumer typically makes a decision at some point to subscribe to *Time*, *Newsweek, The Economist,* or another newsweekly, and thereafter relatively seldom has the opportunity to sample the content of the magazines not subscribed to. Other things being equal, this reduces the opportunity for consumers to be exposed to new ideas and new ways of expressing them, or different opinions.

The magazine industry and the cable network industry arrived at their current competitive marketing strategies by different historical paths that may well be sufficient to explain the present differences between their marketing strategies. If magazine distributors were to bundle magazine subscriptions (and offer "family" collections of magazines) they could reduce costs and probably would make some magazine readers better off economically and others worse off economically. The opposite requirement, applied to the cable industry as proposed, similarly would benefit some viewers and harm others. In both cases there is likely to

be a negative net welfare effect on consumers as a group.[8] But it seems clear that the cause of greater diversity of viewpoints and a better informed public would be better served by forcing publishers to offer bundles and tiers—much the same way the government requires cable operators to sell a basic service tier of broadcast signals—rather than by forcing MVPDs to do the opposite.

Section II of this paper contains a general discussion of bundling and pricing. Section III describes our empirical analysis of the carriage of cable networks by over 2,400 cable systems representing about 80 percent of cable subscribers. Section IV discusses how subscriptions, cable advertising revenue, and cable network costs are likely to be affected by unbundling. Section V describes the data we examined, and the analysis we conducted in an attempt to predict (in a partial equilibrium framework) the effects of mandated à la carte pricing on the prices of cable networks. Section VI offers a brief analysis of the proposal that MVPD systems provide program tiers based on content, an issue to which the analysis in Section V is also applicable.

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[8] Magazine industry costs would increase because such bundling would require an intermediate layer of distribution, which we assume would exist if consumer benefits justified its costs. (See also note 6.) There is a theoretical possibility that path dependence and changing conditions have led one or the other of these two industries to equilibrium pricing strategies that are no longer globally efficient. The Commission faces insuperable practical difficulties in exploring this possibility, and even if these were overcome, still greater difficulties in fashioning a remedy that would be responsive to changing conditions of technology and demand.

II. Background

A. Bundling is a universal and benign practice

Almost every product and service purchased by consumers is "bundled," by sellers, from various components that could each, at least in principle, be sold or priced separately. Purchased bundles are then further combined, by customers, into useful consumption activities. A consumer who wishes to make and drink tea buys several bundles: teabags (consisting of tea, filter paper folded into pouches, string, staples, packaging, advertising, transportation, wholesale and retail services); milk (consisting of raw milk, processing, packaging, advertising, transportation and retail services); sugar (you get the idea); energy to heat the water, and other inputs (e.g., crockery) into the activity of making tea. Most of the components of each bundle could be purchased separately. The consumer herself bundles the bundles into a hot cup of tea.

In the tea example, it is important to note that the price a consumer is likely to pay for bundles such as a teabag or a quart of milk is much lower than what the consumer would pay to purchase all the various components, even aside from the cost to the consumer of assembling the components. This relationship between the price of components and the price of bundles is common, and reflects supply-side economies. One way to think about this price relationship is that customers who want highly personalized, tailor-made products have to pay a premium because they incur costs that are not spread over a large number of fellow-consumers.

Bundling occurs for a variety of reasons. Probably chief among them is that sellers can assemble parts into bundled units more cheaply and efficiently than customers. Customers get a bundled product for a lower price, which they

prefer to a self-assembled product, even though the self-assembled or tailor-made product might more closely match their own special tastes. Sellers obtain competitive advantage from offering bundles of components that are cheaper and/or better suited to the demands of various consumers, and the competitive market process tends to ensure that the driving force behind the assembly of bundles is consumer satisfaction.

A seller decides what components to bundle, and which components to offer for sale individually or in other bundles, in light of its costs and its understanding of what will appeal to customers and the current and expected future marketing strategies of competing sellers. Economists have constructed numerous abstract models of this decision-making process. These models demonstrate, in general, that a given seller's profit-maximizing marketing strategy depends on many factors, including the details of production and demand conditions. Generalizations are very difficult to come by, partly because different bundling strategies produce different impacts on one group of consumers than on another. This makes policy analysis extremely complicated. For example, while it is possible to think of assumptions about demand or cost conditions under which (imperfect) competition does not always maximize consumer welfare, these conditions do not suggest any feasible remedial policy intervention.[9]

Thus, while market power where it exists may reduce consumer welfare, bundling may make things either better or worse. As with competition, even when bundling leaves consumers worse off, it is usually difficult to specify a feasible

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[9] Similarly, bundling by a firm with any degree of market power may either increase or decrease consumer welfare (relative to simple component pricing, holding other things equal). Our point is that market power is neither necessary nor sufficient for bundling to have adverse effects on consumer welfare.

policy intervention. For example, requiring that an imperfectly competitive firm offer both a bundle and its components (mixed bundling) or no bundles, is likely to be meaningless unless prices are regulated. But no regulator in the real world is likely to be able to obtain the demand and supply information required to ensure that such firms price efficiently.

B. Pricing is an essential part of the analysis of bundling, and price regulation would be an essential element of mandated unbundling

It is important to understand that most of the Commission's questions cannot be answered meaningfully without consideration of the *prices* at which various components and bundles are offered, a daunting task. For example, what does it mean when a customer chooses a particular bundle that costs less than the sum of the individual prices of a subset of the components of the bundle? Is such a customer "required" to buy the bundle, or is the customer simply offered an opportunity to take advantage of the cost savings that result from bundling, giving up some tailoring in return? Clearly, the latter interpretation is the correct one.

More ominously, consideration of such pricing issues leads fairly directly to the conclusion that mandatory unbundling is likely to be ineffectual if it is not accompanied by regulation of prices. The Commission has ample and unhappy recent experience with unbundling requirements and associated pricing issues in the telephone industry. Those telephony-related issues are, from a technical economic point of view, almost trivial in comparison with what the Commission would face in determining regulated prices for intellectual property whose consumption is non-rivalrous. By this we mean that efficient telephone component pricing focused on long-run forward-looking incremental cost, with controversy centering on which stakeholder would bear the burden of unrecovered historical costs. In video programming, the Commission would be faced with an economi-

cally efficient price (from a demand-side perspective) of zero, but with a potentially large positive price required to induce production of the next day's programs. The incentive effects of stranded costs would not be a side show, they would be the whole show.

III. Evidence on how cable networks are sold to MVPDs

A. Existing cable network sales practices

Here we investigate whether suppliers require MVPDs to purchase bundles of cable networks. We address that question by examining the programming carried by a large sample of cable systems. The data indicate that a substantial percentage of cable systems do not carry all the program services offered by leading program suppliers such as Time Warner, Discovery, Disney and Viacom. This evidence contradicts the allegation that upstream suppliers of programming to MVPDs require MVPDs to carry all of the supplier's offerings.

Available data on the networks carried by cable systems across the country confirm that systems can and usually do choose to carry some but not all of the networks from any given program supplier. We obtained data on cable network carriage by cable system from Warren Communications.[10] For our analysis, we excluded cable systems that reported carrying fewer than 35 satellite-delivered basic cable networks. It is likely that some of these systems did not report all of the networks they carry, and including such systems could overstate the extent to which certain networks were not carried. Other excluded systems may have relatively small channel capacity and, therefore, are clearly not required to carry all networks that the programming suppliers offer simply because there would not be enough channel capacity to do so.

Our analysis therefore focused on 2,455 cable systems, representing approximately 80 percent of cable subscribers, that reported carrying at least 35 sat-

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[10] Warren Communications News, *Televisions and Cable Factbook: Online*, June 2004.

ellite-delivered programming services on their basic and expanded basic tiers of service. (These systems typically carry broadcast channels, local origination programming, premium cable networks and pay-per-view services in addition to the basic cable networks.) Nine program suppliers that own multiple basic networks were identified, and carriage of those networks by the cable systems was examined. For each supplier of commonly-owned basic cable networks, a count was made of the number of systems carrying one network of that supplier, two networks, etc. The networks offered by each supplier are listed in Appendix A. Networks launched later than 2000 were not included with the relevant supplier. A network launched just last month, for instance, would be too recent to be reflected in the data, if carried at all. In addition, in a test of the proposition that network suppliers require MVPDs systems to carry all the supplier's programming, a recently launched network might not be carried because an MVPD's current carriage agreement may have been signed before the network was launched.

Table 1 shows, for various network suppliers, what portion of cable systems that take any of the supplier's networks take all of its networks. This can be seen in the far right-hand column. For instance, of the 2,454 systems that carried any A&E network, 1,185 or 48 percent carried all four A&E networks. In other words, more than half of the systems carrying any A&E network declined to take all the A&E networks. For most of the other network suppliers shown in Table 1, far less than 50 percent of the systems taking any network carried all the networks. This means that for most suppliers shown, the overwhelming majority of systems declined to take all the networks.

Table 1: Percentage of systems carrying at least quarter, half or more, three-quarters or all the basic cable networks, by supplier group

Supplier	Percentage of cable systems carrying indicated proportion of supplier's networks			
	One quarter or more	Half or more	Three quarters or more	All
A&E	100%	98%	53%	48%
Cablevision	100%	74%	55%	25%
Comcast	100%	83%	69%	41%
Discovery	97%	74%	71%	5%
Disney	100%	96%	62%	23%
Fox	100%	90%	74%	39%
Lifetime	n.a.‡	100%	n.a.‡	50%
Time Warner	100%	100%	74%	4%
Viacom	98%	67%	13%	0%

‡ Lifetime has only two networks included in this analysis, so the one quarter and three quarter columns are not applicable.

The data underlying Table 1 also show that network suppliers sell their networks in many different combinations and on a stand-alone basis. To take Cablevision, which owns four networks, as an example, 26 percent of sample systems carried only a single Cablevision network, 19 percent carried only two Cablevision networks, 30 percent carried only three, and 25 percent carried all four Cablevision networks. This pattern probably understates the diversity of offered "bundles," because systems that carried the same number of Cablevision networks would not necessarily have taken the same networks.

Several of the questions in the Public Notice appear to link "bundling" by programmers selling their networks to MVPDs with "bundling" by MVPDs providing networks to consumers. Linking these two issues may reflect a misunderstanding. Whether or not MVPDs are required to purchase certain bundles of networks from network suppliers has no necessary connection to whether MVPDs will offer the networks to their subscribers bundled or à la carte. MVPDs have

flexibility in the way they purchase their programming from suppliers, as shown in Table 1, and MVPDs offer basic programming in tiers or bundles. Even if, hypothetically, an MVPD were required to carry all of a supplier's networks if it chose to carry any network in the group, this would not change the MVPD's decision about whether to offer those networks to subscribers bundled or à la carte. Alternatively, if a network supplier were prohibited from selling any of its networks as part of a bundle, the MVPD could still bundle the networks it carries. In short, there is no particular connection between wholesale and retail bundling in this context. Of course, any higher prices and reduced program quality effects introduced by regulations aimed at preventing bundling at the wholesale level will be passed through to retail consumers.

B. Should cable networks be prohibited from bargaining for tier placement?

We also set out to investigate whether program suppliers now require MVPDs to place particular networks on particular tiers. For the reasons set out below, we do not believe that it is possible to answer this question empirically, at least in the time available. We conclude that it would be rational for competitive suppliers of cable networks to offer substantially lower license fees to MVPDs who agree to carry particular networks on particular tiers.

Cable networks compete with each other not only in the compilation and sale of programming but also in the sale of advertising. Each network's competitive strategy includes the type and quality of programming it offers, the size and demographic composition of the audience it aims to produce for sale to advertisers, a marketing strategy, and the prices it will offer to MVPDs for its programming and to advertisers for its audiences. Given the large number of competing program services and the ease of entry, marketing a cable network is a complex and risky endeavor.

A supplier chooses its own competitive strategy based on an assumption about whether the network will be bundled with other networks or will be sold à la carte by MVPDs. A given supplier would adopt one national promotional and marketing strategy, and associated pricing and programming decisions, if the network were offered as part of a tier by MVPDs, but probably an entirely different competitive strategy if the network were sold à la carte by MVPDs. Both promotion of the network and programming purchased or produced for the network are necessarily national decisions; they cannot easily be varied geographically. The same is true of national advertising sales. A supplier therefore will be at a disadvantage in competition if its programming service is not marketed uniformly by all MVPDs.

It is therefore understandable that suppliers would seek to ensure that their cable networks are carried on commensurate tiers on all MVPDs. Other things being equal, this policy gives each network an equal foundation to succeed in competition with its rivals.

Nevertheless, the benefits of uniform national placement of a given network are not infinitely large. At least in principle, there is some price that an MVPD could offer to pay that would compensate a supplier for the losses it would sustain as a result of non-standard tier placement by that MVPD. Thus, a supplier might offer its cable network at a given price to an MVPD, but also offer a substantial discount for the MVPD's acceptance of a contractual obligation to carry the network on a given tier or to carry additional networks. MVPDs might interpret or characterize such offers as requiring them to offer a given network as part of a given tier.

There is no guarantee that the maximum price an MVPD would be willing to pay for a given cable network to be retailed à la carte would be greater than the

minimum price that would compensate the network supplier for the costs that a less uniform marketing strategy would impose. In the real world, firms with limited time and resources do not offer hypothetical bargains that they know in advance will likely be unacceptable. Thus, we would not necessarily expect to find evidence of actual offers or negotiations of this kind. In any event, such evidence is not publicly available, and might have to be obtained through interviews and other such techniques. Even if such evidence were obtained, it would shed little useful light on any public policy issue, because the pricing pattern indicated could easily arise under competitive behavior on the part of program suppliers. Thus, efforts by suppliers to ensure that their networks are marketed in a uniform way at retail cannot be interpreted as anticompetitive or harmful to consumer welfare.

IV. Effects of unbundling on the economics of a basic cable network

We turn next to whether the MVPD practice of offering bundles or tiers of services to retail subscribers is harmful to consumers. And more specifically, what would be the effect on cable networks and consumers of a regulation requiring MVPDs to offer all programming à la carte, either by network or by program, with or without continued bundling?

The first part of this question was addressed at a conceptual level in Section II above. Bundling is a universal feature of the economy, and greatly improves consumer welfare by enabling consumers to share the fixed costs of creating goods and services from component parts.[11] Based on current knowledge, there is no more reason to assume that bundling of cable networks into tiers is harmful to consumers than it would be to assume that bundling individual programs into schedules (i.e., networks) is harmful, or that bundling tires with new cars is harmful.

The second part of the question requires simulation of the operation of the industry under conditions different from today's circumstances. That is, an assessment of the impact of bundling and pricing practices requires a specific counter-factual or "but-for" world. An initial issue is what regulatory change is being contemplated. The Public Notice does not make clear exactly how MVPDs might be required to unbundle the networks they offer to subscribers. The following are some possibilities.

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[11] Nevertheless, it is possible to construct hypothetical circumstances in which bundling is harmful. These circumstances are technical, not easily characterized, and differ from one market to another.

1. Pure à la carte—all cable networks must be sold individually and MVPDs may not bundle networks within or beyond the basic "broadcast only" tier. (We assume that, due to government-mandated must carry rules, broadcast networks and PEG channels would continue to be bundled on a basic service tier. We also assume for simplicity that any à la carte requirement would not extend beyond networks, that is, would not require each program to be priced individually, even though there is no obvious logical reason to stop at the network level.)

2. À la carte with bundling permitted—MVPDs are required to offer all cable networks à la carte and also permitted to offer certain bundled packages of some or all of the networks.

3. Limited à la carte—MVPDs are required to sell only certain networks, or certain types of programming (e.g., ESPN or sports more generally), à la carte.

4. Theme tiers—MVPDs are not required to price à la carte, but must create theme tiers that could be individually purchased.

We believe that all of these options will have similar effects since they all involve an element of unbundling. Therefore, we begin by examining pure à la carte. Under pure unbundling, the MVPD charges a flat fee for the basic service tier—consisting of broadcast television and PEG programming—and offers all other programming à la carte. In Section VI we discuss how the existence of theme tiers or a mixture of à la carte and tiers would alter our conclusions. The analysis focuses on how programming suppliers might be affected by unbundling and what impact this might have on consumers. The impact on MVPDs, or the

exact response of MVPDs to changes in wholesale program pricing, is not studied in detail.

This section explores the effects of mandatory unbundling on the economics of a basic cable network in a partial equilibrium framework. The effects unfold as a multistage process, with the impact from one stage influencing the next stage. The process starts with consumers' decisions whether to subscribe to the network. An overview of the sequence of the stages and the impact at each stage is as follows:

• Stage 1: Subscribers—If a cable network were taken off a tier and offered à la carte it would likely lose subscribers. The consumers that choose to subscribe will likely have been heavy viewers of the network.

• Stage 2: Reach—Given a reduction in subscribers, a cable network's audience will decline. In addition, the network's reach will decline because non-subscribers cannot readily sample the network. The network will be placed at a greater disadvantage in attracting advertising relative to the broadcast networks, which are distributed to virtually all television households.

• Stage 3: Viewers—Networks sell audiences to advertisers. A reduction in subscribers will reduce viewing. For each network, typically there are heavy viewers, medium viewers, light viewers and non-viewers. The percentage of each type varies by network. Since heavy viewers are more likely to choose to subscribe, the reduction in viewers will be less than the reduction in subscribers. Nonetheless, the loss of light and possibly medium viewers will significantly reduce a network's overall viewership, and reduce the ease with which the network can expand viewing by making changes in programming and promotion.

• Stage 4: Advertising Revenue—Advertising revenue depends on distribution (the number of subscribers regardless of how much they watch), viewers, and CPM. To an approximation, a cable network's advertising revenue will decline by about the same percentage as its viewership. However, the decline in the network's distribution and other factors will also affect the network's ability to generate advertising revenue.

Unbundling will also affect a cable network's economics in other ways. This section discusses the following two:

• Hit Programs—A network's ability to create and grow a hit program will be reduced since consumers that do not subscribe to the network cannot easily sample the network's programming. This will limit a network's ability to increase subscribership and advertising revenue.

• Marketing Costs—A network will incur additional costs associated with generating consumer demand for the network. These additional transactional marketing costs would likely be hundreds of million of dollars a year.

All of these effects will put pressure on a network to generate additional revenues from subscribers. The effect of unbundling on subscriber prices is explored in Section V.

A. Consumer demand for basic networks

When consumers purchase a bundled tier of networks from an MVPD, they pay a single price for the bundle but no explicit price for the individual networks contained in the bundle. Moving to an à la carte regime would obviously drastically change this arrangement. In some sense, consumers that receive a bundle of networks for a single payment may view each of the individual networks as

having a zero price, because there is no incremental cost to viewing any of the networks within the bundle. With unbundling, consumers will be asked to move from an effective zero price for a network to some positive price for that network. In addition to the explicit price for subscribing to an additional network, there would be an implicit associated transaction cost. This pricing change is so dramatic that current consumer behavior regarding basic networks provides virtually no information about behavior in an à la carte world. Specifically, it is difficult to estimate what portion of consumers would choose to subscribe to a given network at various alternative à la carte prices set by their MVPDs. The effect is likely to differ across networks, may vary depending on whether the network provides niche programming or general interest programming, and may depend on the number of other networks that offer a similar type of programming.

It is probably reasonable to assume that if a cable network were taken off a tier and offered à la carte, other things being equal, it would lose subscribers. At any positive price set by the MVPD, the consumers most likely to decline to take the network à la carte would probably be those who viewed the network least intensively when it was offered as part of a tier. Among the consumers who would be lost from the subscriber base are those that rarely or never watch the network and would pay only a modest amount to preserve their option to watch the network occasionally or for special events.[12] If the price for the network were somewhat higher, some consumers that previously viewed the network to a greater but still small extent would also choose not to subscribe à la carte. The consumers

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[12] There may be some networks, such as the Weather Channel and the various cable news networks, that are valued chiefly as an option. The impact of à la carte pricing on such channels depends on the ease with which consumers expect to be able to subscribe to it when a relevant contingency arises, such as a serious storm.

that choose to subscribe à la carte will include those that place a relatively high value on the network. Because incremental subscribers do not increase program production costs, the cable network will attempt to maximize revenue.[13] The price that accomplishes this depends on the elasticity of demand at various points on the demand curve for each cable network.

Appendix B summarizes some recent economic studies that have examined consumers' willingness to pay for basic cable networks. It also reviews the current pricing and subscription rates for three premium services. We find that the available evidence is not sufficient to predict the demand curve for individual networks under à la carte pricing.

In addition to the obvious changes in marketing and pricing strategies that would be imposed on program suppliers by à la carte pricing, there would be a significant reduction in consumer awareness of competitive options, as described above. To illustrate, imagine what would happen if newspapers were required to offer each section of their publication à la carte. Subscribers who now glance at, but do not read, certain sections would lose their current awareness of the content of such sections. When and if such content becomes relevant, they would have to engage in a relatively costly search process.

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[13] There are, however, positive transactional and perhaps incremental marketing costs. See herein at Section IV.C. Further, while program costs are fixed in the short run and do not vary with audience size, program costs are endogenous in the long run. Other things being equal, in equilibrium attracting larger audiences will require higher program expenditures.

B. Cable advertising rates and revenues

1. Overview

On the one hand, there appears to be a belief held by some individuals that if the number of subscribers to a cable network were reduced by some percentage due to unbundling then the network's advertising revenue would be reduced by the same percentage. On the other hand, some other individuals appear to believe that if a cable network is sold à la carte it will lose only those current subscribers who do not watch the network, or only rarely watch the network, and therefore there will be only a negligible impact on the network's advertising revenue. This section explores the relationship between subscribers, viewers, and advertising revenue.

The hypothesized proportional relationship between tier subscribers and network revenue might roughly hold when a reduction in subscribers is due to MVPD systems no longer carrying a given network. But the proportional relationship is unlikely to hold if the reduction in subscribers is due to consumers' self-selecting to subscribe under an à la carte regime. Advertisers obviously care about the number of viewers and their demographic characteristics. Self-selected subscribers are more likely to view the network than the average tier subscriber. However, unbundling will still produce some reduction in a network's advertising revenue, because there will be a reduction in viewership due to the fact that not all viewers of the network when it was part of the bundle will subscribe to the network if it is sold à la carte. Having fewer viewers reduces advertising revenue because it lowers both the number of viewers and the advertising rate paid per viewer.

Reducing an audience will not normally increase the total value of the audience to advertisers unless the audience thereby becomes demographically more homogeneous in a way that is useful to advertisers. For example, some non-golfers may watch The Golf Channel, but moving The Golf Channel to à la carte might eliminate all but the avid golfers from the audience, potentially making advertisers of golf clubs willing to pay more per viewer—but advertisers of automobiles, beer, etc. inclined to pay less. Whether this exception is important is an empirical issue. However, most advertising revenue, even for such specialized magazines as *Golf World*, is **not** from specialized advertisers, but rather from the major marketers, and the same is true of specialized cable networks.

2. Cable network reliance on advertising revenue

The impact of any reduction in advertising revenues caused by unbundling will likely vary widely across cable networks. Some basic cable networks depend on advertising for most of their revenues, while others are much less dependent on advertising. Kagan Research has estimated 2003 net advertising revenue and total net revenue for 107 basic cable networks.[14] See Table 2. At the extremes, over a dozen of these networks rely on advertising for less than 10 percent of revenue, and there are a couple of networks that are estimated to have no revenue other than advertising. The median value of advertising revenue as a portion of total

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[14] Disney, Fox Movie Channel, and Turner Classic Movies were included as having zero reliance on advertising although this was not explicitly reported by Kagan. Chronicle DTV was excluded as it was reported by Kagan to have zero Net Advertising Revenue and zero Total Net Revenue. Blackbelt TV was excluded as it was reported by Kagan to have no subscribers. Nick Too was excluded because it is a time-shifted feed of Nickelodeon/Nick at Nite. Sundance Channel was excluded because it is a premium service. Source: Kagan Research, LLC, *Economics of Basic Cable Networks 2005: Key Spreadsheets*, June 2004.

network revenue was 44 percent and the mean value was 41 percent.[15] It may be that some of the networks that receive nearly all or nearly none of their revenue from advertising hope to move away from these extremes over time. However, at any given time, as in this 2003 "snapshot," there are many networks at various points on this spectrum that would be affected differently by a decrease in advertising revenue.

Table 2: Basic cable network advertising revenue as a percentage of total revenue

Advertising as a percentage of revenue	Number of networks
0 – 9.99	15
10 – 19.99	5
20 – 29.99	10
30 – 39.99	18
40 – 49.99	15
50 – 59.99	23
60 – 69.99	10
70 – 79.99	7
80 - 89.99	2
90-100	2
Total	107

Advertising revenue is net of agency fees.

This diverse picture is much the same for networks of all sizes. For instance, among the networks that Kagan Research reports as having 80 million or more subscribers in 2003, the percent of revenue attributable to advertising ranged

[15] This is consistent with the GAO finding that "cable networks obtain roughly half of their overall revenues from advertising." (GAO, *Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, October 2003, at 30.) It is not clear if GAO used net or gross advertising revenue in making its estimate.

from 83.7 percent (Home & Garden Television) down to 22.9 percent (American Movie Classics), and Disney with no advertising.

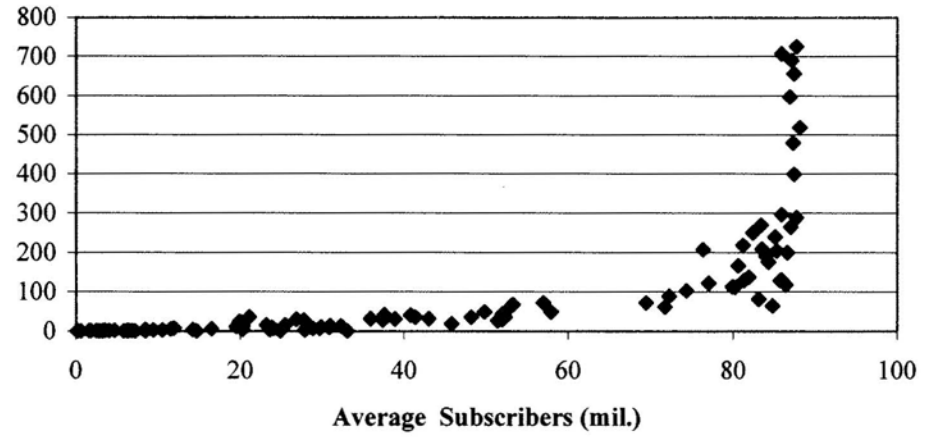
3. Variation in cable advertising rates and revenues

Two of the key factors in determining the advertising revenues of a basic cable network are its distribution (i.e., the number of subscribers to the programming tier that contains the network) and its viewership (as reflected in ratings or estimates of ratings). The network's distribution is the set of all consumers that have the opportunity to view the network at any given point in time. Some portion (in many cases a very small portion) of these potential viewers actually watch the network.

Network advertisers are interested in getting their messages to consumers. As the number of viewers that a network can provide increases or decreases, a network's value to advertisers and the revenue that a network receives from advertising likewise increases or decreases. Discussions with Viacom advertising sales personnel indicated that currently, as a rule of thumb, a cable network needs a subscriber base of approximately 50 million households in order to gain a significant amount of national advertising. One reason for this is that national advertisers prefer broad reach and it is at the 50 million subscriber level that the network is available to about half of all TV households. Additionally, national advertisers are interested in a network's ratings, and while Nielsen provides ratings information for networks starting at about 20 million to 30 million subscribers, the ratings numbers become more statistically reliable when a network reaches about 50 million subscribers. This is due to the fact that the Nielsen rating system is based on a sample of households. Fewer subscribers to a network means that there are likely fewer Nielsen households that report on the network, and as sample size decreases uncertainty increases.

Kagan Research has estimated the annual advertising revenue for 105 basic networks.[16] Figure 1 depicts net advertising revenue in 2003 for these 105 networks plotted against their subscriber bases. As Figure 1 makes clear, advertising revenue is not a linear function of tier subscribers.

Figure 1: Network Net Ad Revenue ($ mil.)



Though the size of the subscriber base is important, it is not the only factor explaining a network's advertising revenue. Figure 2 shows net advertising revenue plotted against the average 24-hour number of television households delivered for 49 cable networks.[17] This indicates that the number of households viewing a network is a key determinant of the network's advertising revenue. This

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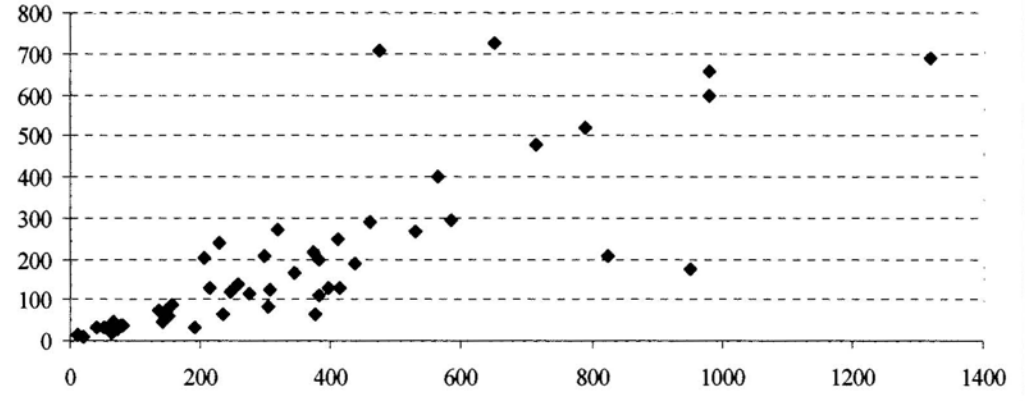
[16] Kagan Research, LLC, *Economics of Basic Cable Networks 2005: Key Spreadsheets*, June 2004. This excludes those networks that do not sell advertising.

[17] Id.

simple analysis does not hold constant the demographics or the desirability of the network's audience to advertisers.

Figure 2: Network Net Ad Revenue ($ mil.)



4. Impact of à la carte pricing on advertising revenue

As discussed above, if a basic cable network were to be dropped by some MVPD systems, the number of actual viewers would likely decrease in about the same proportion as the decrease in the total subscriber base. However, in the case of a cable network being taken off a tier and offered à la carte, this assumption is not correct. At any positive price set by the MVPD, the consumers most likely to decline to take a network à la carte will be those who viewed the network least intensively when it was offered as part of a tier. Among the consumers who would be lost from the subscriber base are those that rarely or never watch the network and would pay only a modest amount to preserve their option to watch the network occasionally or for special events. If the MVPD's price for the net-

work were somewhat higher, some consumers that previously viewed the network to a greater but still small extent would also choose not to subscribe à la carte. The viewers who choose to subscribe à la carte will include those who place a relatively high value on the network, and it is reasonable to assume (although of course not universally correct) that such viewers watch the network when offered on a tier more than the average tier subscriber.

For these reasons, the reduction in a network's subscriber base is likely to exceed, in percentage terms, the decline in its viewing audience. For a simplified hypothetical illustration, suppose that, when offered by MVPDs as part of a tier, Network X routinely attracts 500,000 viewing hours in the course of a 24-hour day. Suppose further that tier subscribers can be broken into eight equal-sized segments, each with differing propensities to watch the network. The number of average daily viewing hours coming from each segment is depicted in Table 3.

Table 3: Viewing hours for a hypothetical tiered Network X, by subscriber segment

Segment	1	2	3	4	5	6	7	8	All
Viewing Hours	0	0	0	25,000	50,000	75,000	150,000	200,000	500,000

Now suppose in this hypothetical illustration that 75 percent of Network X's subscriber base chooses not to subscribe when MVPDs offer the network à la carte. The 75 percent of subscribers who are lost will include all the subscriber segments that viewed the network seldom if ever. Segments 1-3 in Table 3 represent these subscribers. Segments 4-6 would also be lost, which would decrease average daily viewing hours by 150,000, or 30 percent of the initial 500,000

level.[18] The remaining two segments would provide a daily audience of 350,000 viewing hours. Thus, as a first approximation, a 75 percent decrease in the subscriber base of this hypothetical network would result in only a 30 percent reduction in viewing hours. As a rough estimate, advertising revenue would decrease by 30 percent in this hypothetical example. Of course the pattern of viewing across subscribers varies by network. Some cable networks may have most of their viewing concentrated within a small group of subscribers, while other networks may find their viewing is spread across a large group of subscribers. Reducing an audience is unlikely to increase CPMs. Many of the advertisers on a network sell products that appeal to a broad audience and purchase time in order to reach a broad audience. For such advertisers, there is little or no benefit, and perhaps a disadvantage, from reducing the audience. In addition, many networks are general interest networks and shrinking the audience for such a network probably would not change the overall make-up of the audience in a way that makes the audience more attractive to advertisers.

The loss of advertising revenue when moving to an unbundled environment may be more than proportional to the reduction in viewing. On a per-viewing-hour basis, the audience Network X offers advertisers in the à la carte environment will tend to be less valuable because it is smaller. As explained above, advertisers value unduplicated reach, and pay a premium for a larger audi-

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[18] This simplified hypothetical obviously omits other factors such as income that would affect which consumers choose to subscribe to a channel à la carte. It is not necessarily the case that all consumers who view a network at a low level would decline to take it à la carte, nor is it necessarily the case that all consumers that view a network most intensively would choose to take it à la carte.

ence. For this reason, a 10 percent increase in audience size will produce a greater than 10 percent increase in advertising revenue.[19]

Another aspect of advertising that would likely be affected by à la carte pricing is the ability of a "hit show" to be discovered and grow its audience. Part of the hit show phenomenon is that a program can quickly attract viewers. Many of these new viewers are likely to be infrequent viewers of the network, but nonetheless have access to it. When the network is part of a tier, these infrequent viewers can quickly and easily switch to the network and watch the program. After sampling the programming on the network, these viewers may then become more frequent viewers of the network. However, if the network were sold à la carte, there would be a longer delay and perhaps a smaller response because switching would now be more involved and the costs of switching would be higher. This would reduce the network's ability to generate audiences and advertising revenues from a hit show.

C. Other costs due to unbundling

In addition to the possible reduction of advertising revenues, there are various costs that networks, MVPDs and consumers are likely to incur when cable networks are offered à la carte. This subsection examines the nature and magnitude of some of those additional costs based on data and information provided by

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[19] This effect was demonstrated empirically by Franklin M. Fisher, John J. McGowan and David S. Evans in "The audience-revenue relationship for local television stations," *The Bell Journal of Economics,* Autumn 1980, pp. 694-708.

Showtime Networks Inc. (a subsidiary of Viacom), which is attached as Appendix C.[20]

A cable network will face additional marketing costs, once unbundled, because it must now sell its programming to consumers as well as to MVPDs. The network must compete with dozens, if not hundreds, of other networks for the consumer's selection. MVPDs and consumers will face increased costs as well. Cable operator costs may increase due to the need for additional addressable converters, additional headend equipment, increased marketing costs, increased customer service costs, increased technical costs, and increased costs associated with customer ordering and billing. At least a portion of these increased costs will likely be passed on to subscribers. MVPDs will also likely face a reduction in advertising revenues due to fewer subscriptions.

Consumers will face increased search costs, as they must now learn about the various cable networks in order to determine which ones to select. Consumers will also face a probable loss of some existing networks and program services, a reduction in the number of new networks and program services entering the market, a lost option value to view infrequently watched programming on networks no longer subscribed to, and additional equipment costs. As the GAO pointed out, the need for subscribers to have an addressable converter box could be costly.[21] According to the FCC's 2002 cable rate survey, the average monthly rental price for a digital converter box and remote control is $4.87.[22] Subscribers with multi-

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[20] Showtime Networks, *The Impact of A la Carte Pricing on Multichannel Video*, July 2004.

[21] GAO, *Issues Related to Competition and Subscriber Rates in the Cable Television Industry*, October 2003, at 32.

[22] FCC, *Report on Cable Industry Prices*, MM Docket No. 92-266, July 8, 2003, at Table 10.

ple television sets would need multiple converter boxes. The average American television household has about 2.5 televisions, and hence could face an equipment cost of over $12 per month in order to have access to à la carte networks.[23]

Currently, much of a cable network's marketing is directed at MVPD systems, with consumer-directed marketing designed to improve ratings for specific programs. However, in an à la carte regime, a network's marketing focus would need to change to the consumer to generate consumer demand for the network. The network as a whole would have to be marketed, not just specific programs. A cable network's additional costs would consist of transactional marketing expenses and the associated sales organization, business operations, human resources costs and associated auditing costs. Transactional marketing is a program of tactics, activities and resources designed to generate subscriptions to an à la carte network by stimulating consumer demand and influencing consumer choice at the point of sale. These tactics include consumer rebates, free previews, promotional offers, telemarketing, direct mail, customer contact personnel (CCP) sales incentives, CCP training and awareness tools, and distributor incentives to favorably price, package and promote the network such as volume and penetration discounts, retail price incentives and cash marketing support. In addition to these transactional marketing expenses, there are associated costs of the personnel needed to implement the transactional marketing program. For the most part, these transactional and associated marketing costs would be in addition to the existing advertising and marketing expenses incurred by a cable network. Indeed,

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[23] Kagan Research, *Digital Television*, April 29, 2004, p. 5. Note that some households, particularly those subscribing to a direct broadcast satellite service, a digital tier of service, or a premium service, may already have a converter box for some of their television sets. These households would need a converter only for any television that is not currently equipped with a converter box.

advertising and marketing expenses may also increase in an à la carte regime as networks compete to get noticed by consumers.

Showtime Networks' analysis of the annual connects and transactional marketing expenses for the premium movie network category consists of Showtime Networks (Showtime, The Movie Channel, Flix), Home Box Office (HBO, Cinemax), and Starz Encore Group (Starz, Encore). Showtime Networks determined that the average annual transactional and associated marketing costs per connect for the premium network category as a whole is about $11.25.

This estimate is likely to be understated because $11.25 is the average cost when one premium network supplier is competing principally against only the other two existing major premium network suppliers. The transactional costs would likely be much higher if the network had to compete against the hundreds of other networks available on an unbundled basis. Moreover, the transaction costs likely would be higher as the recently unbundled networks scramble to attract initial subscribers. The $11.25 estimate is based on maintaining a given level of subscribers using the well-established marketing expertise of the premium networks. For these reasons, Showtime estimates that the average annual transactional and associated marketing costs per connect for an unbundled network would average about $16.90.

One way to estimate the total transactional and associated marketing costs that would be incurred were a cable network to be offered à la carte instead of as part of a tier is to consider the number of subscribers to the network and the churn rate. Churn is defined as the percentage of households that discontinue their subscription to the network each month. If a network wants to maintain its number of subscribers, much less grow, it must replace those subscribers it loses to churn.

Showtime Networks determined that the average monthly churn rate for Showtime, The Movie Channel, HBO, Cinemax and Starz is currently 5.9 percent.

Consider a network with 25 million à la carte subscribers. If the network's monthly churn rate is the same as that for those five premium networks, 5.9 percent, then the average annual "replacement" connects needed just to maintain the subscriber base are 17.7 million households. Using an estimate of $16.90 per connect, the annual transactional and associated marketing costs incurred by the network would be about $300 million just to maintain its subscription level of 25 million.

V. Effects of unbundling on prices paid by subscribers

As noted above, one cannot confidently predict all the effects that would result from a change in the way that cable programming is sold to consumers. The retail bundling of cable networks is part of a complex system of interrelated economic decisions that involves program quality and marketing as well as pricing, as described above. In addition, the competitive interactions among networks are also important, as are the individual network pricing decisions made by the MVPDs.

The available evidence is not sufficient, even leaving aside the general disequilibrium into which the entire industry would be thrown by mandated unbundling, to predict exactly what prices would prevail for individual networks in a pure à la carte world. It does seem reasonable to expect, however, that any MVPD subscriber who sought to subscribe to the same array of networks now available on any given tier would pay more, and quite likely much more (because of the lost advertising support, decreased subscription revenue and increased marketing costs) to receive the current quantity and quality of programming, and that is indeed the result that emerges from the modeling exercise in this Section. The model indicates that consumers who subscribe to a moderate or large number of networks will end up paying more, while consumers who subscribe to only a few networks may pay less. However, in the longer run, there is no guarantee that the networks preferred by the latter group will remain in existence.

A complete general equilibrium model of consumer demand, network programmer supply, and MVPD system pricing is beyond the scope of this paper. But in order to provide some gauge of possible impact on consumer prices, we develop a simple model of the effect on subscriber prices of imposing à la carte. We do not check to see whether the resulting predictions of prices are consistent

with a competitive equilibrium. While we have made some simplifying assumptions in order to arrive at our estimates, the results are nonetheless instructive.

The analysis that follows focuses on the 110 cable networks for which Kagan Research provides 2003 data.[24] The analysis begins with an assumption as to the percentage of current subscribers that would continue to subscribe if à la carte pricing were required. We have selected three different subscriber retention rates: 10 percent, 20 percent, and 30 percent.[25]

For the reasons discussed in Section IV.B, there is likely to be some loss of advertising revenue if unbundling is required. In order to account for the effect of lost advertising revenue on wholesale cable pricing, we have selected three different levels of advertising revenue retention: 80 percent, 60 percent, and 40 percent. Our assumption is that those consumers who continue to subscribe to a particular cable network under à la carte are the core viewers of the network. Hence, regardless of how many subscribers are retained, it is likely that the percentage loss in advertising revenue will be less than the percentage loss in subscribers.

As discussed in Section IV.C, programmers also are likely to incur additional marketing costs if à la carte pricing is imposed. In order to account for that effect on wholesale network pricing, we have estimated the additional transactional marketing and associated costs of each network. We assume that a network's monthly churn rate is the same as that for the existing premium networks, 5.9 percent, and that the average transactional marketing and associated costs are

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[24] Kagan Research, *Economics of Basic Cable Networks 2005: Key Spreadsheets*, June 2004.

[25] These values seem to cover the reasonable range of subscriber retention given the current take rates of the premium cable movie networks. See Appendix B.

about $16.90 per connect per year. Therefore, the additional expense the network incurs to replace those subscribers it loses to churn is about $1.00 per subscriber per month.[26]

In the real world, networks can respond to unbundling in a variety of ways. To facilitate an illustrative analysis, we assume that networks will raise license fees in order to offset any decline in subscriber or advertiser revenues and any increase in marketing costs, rather than lowering program expenditures. These assumptions permit us to calculate a network's wholesale price (license fee) to the MVPD systems. We then assume that MVPD systems apply a uniform 90 percent markup over wholesale price to calculate each network's à la carte retail price.[27]

Using these assumptions, we estimate à la carte retail prices for each of the 110 networks. We then compute the average price of a network under à la carte

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[26] The annual cost to replace subscribers lost to churn equals $16.90 × 5.9% × 12 × subscribers. Therefore, the cost per subscriber per month equals $16.90 × 5.9%, or about $1.00.

[27] The assumption of 90 percent markup appears to be in line with current MVPD markups. NCTA estimated 2003 basic cable subscriber revenue at $28.962 billion and 2003 premium subscriber revenue at $5.192 billion. (NCTA, *Cable Developments 2004,* p. 14.) Basic cable subscribers were reported at about 73.4 million in 2003. (NCTA, p. 8.) This implies basic and premium subscriber revenues of $38.79 per subscriber per month. In its 2002 cable industry survey, the FCC found that the average price of the basic service tier was $14.45. (FCC, *Report on Cable Industry Prices*, MM Docket No. 92-266, July 8, 2003, at Table 1.) This implies that subscribers paid about $24.34 per month for the programming beyond the basic service tier. Total cable programming expenditures, including license fees, copyright fees and investments in local original programming, was estimated at $11.46 billion, or $13.02 per basic subscriber per month. (NCTA, p. 13.) The markup of $11.33 over programming costs implies an estimated markup of 87 percent. This estimate understates the actual markup. The basic service tier often includes some basic networks, so some of the $14.45 should be considered payments to networks. The payment to networks or $13.02 is overstated because programming expenditures include local programming expenditures. Making these adjustments would increase the estimated markup.

pricing.[28] The results are presented in Table 4. For example, assuming that networks increase subscriber fees to recover lost subscriber and advertising revenue and increased transactional marketing costs, that networks retain 30 percent of their subscribers and 80 percent of their advertising revenue, and a 90 percent markup of the wholesale price, the average price of a network under à la carte pricing would be $3.39.

Table 4: Weighted average retail price of a network under à la carte pricing

Advertising Revenue Retention	Subscriber Retention		
	30%	20%	10%
80%	$3.39	$4.13	$6.37
60%	$3.61	$4.46	$7.03
40%	$3.83	$4.79	$7.70

As either the advertising revenue retention rate or the subscriber retention rate falls, the average price of a network increases. A decline in subscriber retention rates from 30 percent to 20 percent, holding the advertising revenue retention rate constant, increases the average price of a network by slightly less than $1.00, but a decline from 20 percent to 10 percent increase the average price of a network by over $2.00 to almost $3.00. If the advertising revenue retention rate declines from 80 percent to 60 percent, holding the subscriber retention rate constant, the average price of a network increases by 22 cents to 66 cents; a decline from 60 percent to 40 percent has the same effect.

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[28] Throughout this section, the average price of a network is computed as the subscriber-weighted average price of the 110 networks included in the analysis. All prices reported are retail prices.

For comparison, consider that currently the average retail price of a network is $0.38.[29] Hence, after unbundling, the average retail price of a network is estimated to be 9 to 20 times higher than it is currently.

At the mid-point of the ranges considered—20 percent subscriber retention and 60 percent advertising revenue retention—the average price of a network is $4.46. At this price, the average cost per subscriber (exclusive of the basic tier fee and converter box fee) for 10 à la carte networks would be $44.60.[30] Adding the cost of the basic service tier and one converter box, the average consumer would pay $63.92 for basic service and 10 cable networks.[31] This is over 50 percent higher than the Commission's estimated 2002 average programming and equipment charge of $40.11 for basic service, equipment and 46 satellite delivered cable networks.[32]

It is possible that instead of raising license fees a network may respond by decreasing programming expenditures. However, any decrease in program quality is a cost to consumers, equivalent to a price increase. It is also quite possible that a network may not be able to recover from the decrease in revenues and increase in costs and may simply fail. Absent much better information on consumer de-

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29 This is based on Kagan Research's estimates of subscribers and license fees for each of the 110 networks, and assumes a 90 percent retail markup of license fees.

30 At least one study found that the average cable subscriber watches 12 to 15 channels. *See*, Concerned Women for America, "Cable Choice is Channel Choice," 2004. Since these channels probably included the broadcast networks, we use 10 cable networks in this example.

31 In its 2002 cable industry survey, the FCC found that the average price of the basic service tier was $14.45 and the average price of a digital converter box was $4.87. FCC, *Report on Cable Industry Prices*, MM Docket No. 92-266, July 8, 2003, at Tables 1 and 10.

32 Id.

mand for individual networks, as well as assumptions about the nature of and the path to the new industry equilibrium, it is not possible to predict which networks will fail. But it is reasonable to believe that at least some networks will be forced out of existence by unbundling.

C. Effect of unbundling on the number of cable networks

Finally, a natural question is whether the overall number of cable networks will increase or decrease as a result of unbundling, and whether entry costs for new networks will increase or decrease. As with the issues addressed above, a more extensive and speculative modeling effort would be required to answer these questions precisely. It is clear, however, that the short-run or partial equilibrium effect of unbundling would be to reduce the number of networks and to increase entry costs. The number of networks would likely decrease because the models above predict both decreasing revenues and increasing costs for individual cable networks required to be unbundled. As is well known, many cable networks are, for a variety of reasons, unprofitable or marginally profitable. At least some of these networks will be forced out of existence by unbundling. Further, it is possible that there would be a reduction in aggregate expenditure on programming by the surviving networks, which would presumably result in a reduction in average program quality.

As to entry, it appears that new entrants would have a more difficult time than at present because tier subscribers would not be able to sample or "surf" their programs, but would instead have to commit to a network subscription. Overcoming this handicap would require increased expenditure on upfront and continuous advertising and promotion.

VI. Other regulatory proposals – blocking and theme tiers

The preceding sections have discussed the economics of bundling and the consequences of requiring that MVPDs provide cable programming on an à la carte basis. We can now draw on this background to discuss other regulatory proposals and specific questions raised by some consumers and public officials.

A. Blocking

One complaint that is sometimes made about tiers of programming offered by MVPDs is that some subscribers find objectionable programming bundled together with programming that they want. Of course, this can happen in any of the packages of media content that consumers purchase. *Time* or *Newsweek* may occasionally or even regularly contain material to which certain individuals object and which they do not want their children to see, even though they value the remainder of the content of the magazine and would encourage their children to read that content. The same may be true of local daily newspapers, of which most communities have but one. Consumers may have to make difficult decisions about whether to subscribe or not, and if they decide to subscribe they may need to take steps to protect their children from gaining access to the material that is objectionable. Similarly, consumers must decide whether to subscribe to MVPD bundles of content that contain objectionable material, and if they do subscribe they must take steps to prevent children from access to the objectionable material.

Consumers can take various steps to ensure that they do not watch these networks. Many set-top boxes, including most or all modern boxes, can be programmed to block specific networks, and some set-top boxes and televisions can block individual programs. Cable companies will, on request and for no additional charge, install a physical device outside the home that filters out or "traps" a spe-

cific network so it cannot be received. Consumers can also simply change the channel and not tune their televisions to the objectionable networks.

Some consumers who use a set-top box or "trap" to block a network ask why the fee they are charged by their MVPD is not reduced to reflect the reduced number of networks they are actually getting. However, ordinary consumer experience would not lead them to expect a fee reduction. As was pointed out above, sellers of all types bundle components together as products or services and provide them at a lower price than the sum of the cost of the individual components. A consumer who wants to buy a product that is not "off the shelf," customized either by including or excluding some features, often has to pay more. A diner ordering a steak may ask the restaurant to hold the baked potato that is "bundled" with the steak, but she does not expect the restaurant to decrease the price of the meal accordingly.[33]

The consumer who finds a network objectionable is not significantly different, in this regard, from a consumer who finds a network uninteresting. As pointed out above, most consumers have networks in their MVPD's programming tier that they do not watch. These consumers decide to subscribe to the MVPD's programming tier because, taken together, the networks that consumers do watch have a value that exceeds the price that the MVPD charges. They do not expect to

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[33] As with any unbundling of content, blocking imposes costs on the MVPD and the cable network, as well as other subscribers. Returning to the magazine analogy from the Introduction Section, a subscriber could ask the publisher of *Newsweek* that a particular section dealing with foibles of celebrities be blacked out. Conceivably, the publisher might accommodate this request for a subscriber, or (more plausibly) even offer a redacted edition of the magazine if a significant percentage of subscribers had the same interest. However, both the costs and revenue effects of tailoring content in this way would likely, in a competitive environment, result in subscribers paying a higher price for the customized magazine, rather than receiving a discount because of the reduced content.

have their fee reduced to reflect the networks that they do not watch. Similarly, consumers who choose to subscribe even though they either block or do not watch certain objectionable networks find the value of the programming they do watch exceeds the price they have to pay, without any fee reduction.

The issue here arises not merely with MVPD bundling but with bundling of any kind. More specifically, suppose that a shopper needs exactly 12 ounces of bitter chocolate for a recipe. The store sells bitter chocolate in a 10-ounce bar for $2.00 (20¢ per ounce) and a 15-ounce bar for $2.25 (15¢ per ounce). The shopper buys the larger bar and later returns with the unneeded 3 ounces to the store, requesting a refund. Should the law require a refund in these circumstances? If so, how much should the refund be? What would happen to the cost of retail services and the prices of goods sold at retail if the law required a refund in these circumstances? It does not take much imagination to see that such a law would quickly produce a nightmare for suppliers and consumers alike.

In any event, it currently may not be economical or possibly even feasible for MVPDs to report reliably to a network the number of subscribers that block the network, especially if subscribers block the network using a set-top box. Thus, there is no mechanism for MVPDs to reduce their program acquisition fees when a consumer chooses to block. There is no cost savings for the MVPD to "pass through" to the consumer as a reduction in the consumer's monthly fee.

B. Theme tiers and mixed bundling

The Commission asks about the likely effects of mandating theme tiers. For example, there might be a sports tier, a movie tier, an adult tier, and/or a family tier. Presumably, material likely to be objectionable for children would be omitted from the family tier, for example. It is unclear who decides what program

networks would be made part of such a tier. There are at least two problems with this approach. First, to the extent that MVPDs compete with one another (there are now at least three major MVPDs available to nearly every consumer, and sometimes other minor ones), a theme tier requirement would constrain the industry away from its competitive equilibrium. Policymakers generally accept the legitimacy of competitive market outcomes, if not because such outcomes optimize consumer welfare, then because there is no basis for improving matters with a regulatory intervention. In this case, forcing MVPDs to market their services in a way that differs from the strategy that best serves consumer demand seems likely to reduce economic welfare.

The second objection to a requirement of theme tiering is that it is not a content-neutral regulatory intervention. Indeed, the essence of the intervention is to organize content in a way different from the way the MVPD would like to organize and market it. This raises First Amendment issues that the Commission and the courts would have to address.

Government-mandated tiers would entail the same problems as à la carte pricing. Mandated tiers would reduce subscriber and advertising revenues because of reduced circulation for each network included on a tier that was not chosen by all current subscribers. Dividing the basic bundle into tiers would require consumers to pay for set-top boxes as with à la carte pricing of networks. Tiering would lead to increased marketing, transactional, and customer support service costs. Transactional costs may even be higher than with à la carte because a programmer would have to convince consumers to subscribe not to just its network, but to some tier of programming that will likely differ across MVPD systems. Indeed, a programmer's transactional expenditure will benefit not only itself, but whatever networks it is packaged with on the tier. Strategic interaction among

networks in each tier might result in promotional expenditures greater or less than optimal levels.

Other proposals include "mixed bundling," whereby an MVPD must offer all the networks à la carte as well as in a bundle, and "voluntary" à la carte, whereby an MVPD can offer some networks à la carte rather than as part of a bundle. Again, breaking networks out of a tier taken by all subscribers would reduce a network's subscriber and advertising revenues because of reduced circulation for the network. Offering any of the networks à la carte would require consumers to pay for set-top boxes and would lead to increased marketing, transactional, and customer support service costs. [34] A program supplier's optimal promotional and marketing strategy and associated pricing decisions would likely differ if its network is sold à la carte rather than as part of a tier. If a programmer's network is offered à la carte in some areas and as part of a tier in other areas the programmer may need two different types of advertising and marketing campaigns. Indeed, the programmer may be in a difficult position because the programming would need to appeal to the à la carte consumer and to the tier consumer, and the optimal type of programming to reach theses two types of consumers may be different. There could also be problems in selling national advertising. Hence, a cable network may not be able to survive in competition if its program service is not marketed uniformly (i.e., on the same type of tier) by all MVPDs.

Being forced to unbundle only a few specific networks will create the problems discussed above for those networks that are unbundled and might not

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[34] In a mixed bundling regime, consumers who subscribe to the bundle may not need a converter box.

reduce the price of the remaining bundle of networks. To the extent that certain subscribers are willing to pay only a very low price for the networks that are unbundled, the price they are willing to pay for the remaining bundle of networks is unchanged or only slightly reduced. If there are many such subscribers, the MVPD will not significantly reduce the price of the bundle. Since these consumers were initially purchasing the bundle to view networks other than the networks that were unbundled they should be willing to pay the same price for the bundle excluding those networks.

VII. Conclusion

We conclude that mandatory unbundling of cable program services at the wholesale or retail level would be harmful to consumer welfare in the United States. At the wholesale level the evidence suggests that bundling simply is not an important feature of the commercial landscape. Where buyers do perceive it to occur, they probably mistake what amounts to a quantity discount for a true bundled offer. At the retail level, complaints about bundling may reflect the false assumption that the sum of the competitive prices for unbundled networks would be the same as current bundle prices. As we have shown, the reality is that the components would likely cost more than the bundle. More generally, bundling is a very common and efficiency-enhancing economic phenomenon. In its absence, costs and prices would increase, making virtually everyone worse off and reducing the output of goods and services.

Even if all of the foregoing is assumed to be incorrect, so that bundling actually reduced welfare in the MVPD programming markets, remedial action would be elusive. Bundling is in part a pricing phenomenon, and it could not be limited without regulating both the definition of what constitutes a bundle for each product or service as well as its price. In contrast to the task of regulating unbundled elements of local exchange services, where the conditions for efficient pricing are relatively straightforward, there is no generally accepted rule for pricing non-rivalrous consumption goods such as video programming that is incentive compatible on the supply side and efficient on the demand side.

Appendix A. Basic cable networks included in each network supplier

Network supplier	Cable networks
A&E	Arts & Entertainment, Biography, History Channel, History Channel International
Cablevision	American Movie Classics, Fuse, Independent Film Channel, Women's Entertainment
Comcast	E! Entertainment Television, Golf Channel, Outdoor Life Network, Style.
Discovery	Animal Planet, Discovery Channel, Discovery en Espanol, Discovery Health Channel, Discovery Home Channel, Discovery Kids Channel, Discovery Science Channel, Discovery Times Channel, Discovery Wings Channel, The Learning Channel, Travel Channel. (FitTV was not included because it was acquired in 2001 and re-launched in 2004.)
Disney	ABC Family Channel, Disney Channel, ESPN, ESPN2, ESPN Classic Sports, ESPNews, SoapNet, Toon Disney
Fox	Fox Movie Channel, Fox News Channel, FX, Speed Channel (National Geographic Channel was not included because it started in 2001.)
Lifetime	Lifetime, Lifetime Movie Network (Lifetime Real Women was not included because it started in 2001.)
Time Warner	Cartoon Network, CNN, CNNfn, Headline News, NBA.com TV, TBS Superstation, Turner Classic Movies, Turner Network TV
Viacom	BET, BET Jazz, CMT: Country Music Television, Comedy Central, MTV: Music Television, MTV Espanol, MTV2, Nickelodeon/Nick at Nite, Nickelodeon GAS, Noggin, Spike TV, TV Land, VH1, VH1 Classic, VH1 Country, VH1 Soul.

Appendix B

Demand evidence

Economic literature

Recent economic studies have attempted to estimate mean consumer willingness to pay for basic cable networks while accounting for the differences among networks.[35] One study estimates the price of the basic cable bundle when different cable networks are added.[36] The study assigns cable networks to various groups (news, sports, family, etc.) and then estimates the common value of any member within a group. Using nearly fifteen-year-old subscriber data (from 1990), this study finds that the addition of a family or sports network increased the price of basic cable by 7 percent while the addition of a music, news, or educational network increased the price by 4 percent. At $15.90, the average basic

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[35] Earlier economic literature focused on the incremental price charged by cable operators when they included an additional cable network. No distinction was made for the type of network added. Incremental values found ranged from a few cents per month to less than a dollar per month. These results most likely do not provide a useful guide to optimal à la carte prices for a number of reasons. First, there is no variation in the value of different cable networks. It is likely that some cable networks are more valuable to consumers than others (some may even have negative values for a portion of subscribers). Averaging consumer value over all cable networks will mask this variation. Second, these studies attempt to determine the incremental value consumers place on a cable network when it is *included in* the basic or expanded basic bundle. This value is certainly affected by the other choices already available within the bundle. This is especially problematic when the value estimated is for an additional generic cable network. Third, these studies make no allowance for non-subscriber revenue to cable systems. Fourth, the studies do not control for variation in cable system programming acquisition costs. Cable systems not only take into consideration consumer demand and advertising revenue, they also account for the cost of the programming. There are obviously wide differences in carriage fees paid by cable systems that must be included in any model of consumer demand.

[36] Diane Anstine, "How Much Will Consumers Pay? A Hedonic Analysis of the Cable Television Industry," *Review of Industrial Organization*, Number 19, pp. 129-147, 2001.

cable price in the sample, this would imply an increase in price of $1.11 and $0.67 respectively.[37] The use of categories of networks was required because the author was unable to get statistically significant results when using individual cable networks.

The estimates of consumer value derived in this study are of limited value for estimating optimal cable network à la carte pricing for several reasons. First, values are not derived for particular networks, but for each of the 15 categories of networks defined by the author. Second, the value of the network is determined when *added* to the basic bundle. This may not be the same value assigned to the network *outside* of any bundle. Third, the study estimates the average value across all consumers and does not indicate how the value varies across consumers—i.e., the results do not describe demand curves.

In a series of papers by Gregory Crawford, consumers' mean willingness to pay is estimated for particular networks.[38] Professor Crawford and his co-authors use carriage variation across cable systems to estimate the mean willingness to pay for the top 15 cable networks (based on total subscribers). Using data from 1992 and 1995, these studies find that the mean willingness to pay varies

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[37] Anstine finds that the addition of general program networks and superstations adds no significant value. The author speculates that this is due to the similarity between those networks and over-the-air programming.

[38] "The Impact of the 1992 Cable Act on Household Demand and Welfare," Gregory S. Crawford, *Rand Journal of Economics*, Vol. 31, No. 3, Autumn 2000, pp. 422-449. "The Discriminatory Incentives to Bundle in the Cable Television Industry," Gregory S. Crawford, Working Paper, University of Arizona, April 2, 2004, "Bundling in Cable Television: Incentives and Implications for Regulatory Policy," Mark Coppejans, Gregory Crawford, Duke University Working Paper [Draft], November 1999.

from a high of $5.50 for ESPN to a low of -$1.22 for the Family network.[39] Even though the authors have estimated values for particular cable networks, these estimates retain some of the unsuitable features of the previous study for purposes of estimating prices under à la carte pricing.

Inferences from premium services

A limited amount of information about consumer choice and prices can be gleaned from premium networks that are now offered à la carte. Data from Warren Communications show, for many cable systems, the number of subscribers taking individual premium networks and the monthly fee charged by the cable operator for that network. Usable data were available for HBO on 3,416 systems, for Cinemax on 1,944 systems and for Showtime on 1,922 systems.[40]

To study thoroughly the effect of price on subscription levels, one would want to control for economic and demographic characteristics of MVPD systems' service areas, the price and quality of basic service, the number of broadcast signals available, and other relevant factors. Such a study is not feasible within the time available to respond to the Public Notice. Nonetheless, some rough observations may be useful in calibrating the analysis of prices and subscription levels that might be expected among basic networks in an à la carte environment.

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[39] Negative values are possible since the authors are measuring mean willingness to pay. The network may still have positive value to the bundle if some subscribers value it highly.

[40] Systems were excluded if they did not carry a particular network, if there was no fee reported to receive that network alone (as opposed to a bundle of premium networks), if no subscriber counts were reported, or if the reported number of subscribers to the premium service exceeded the number of basic subscribers reported for the system.

Among the systems providing useable data:

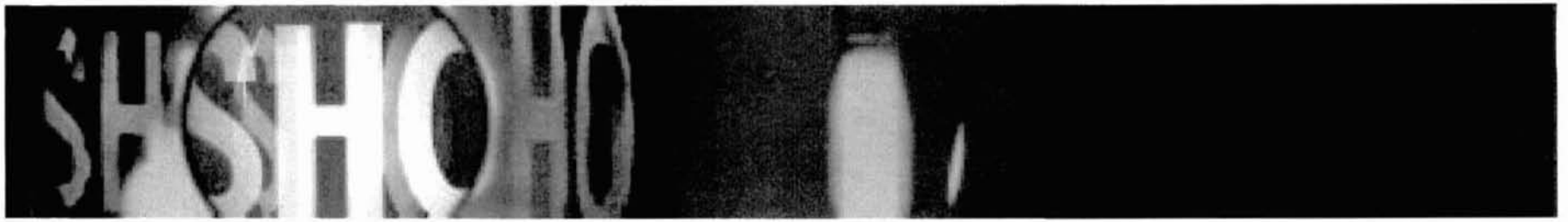
- Ninety-three percent of HBO subscribers pay between $8.00 and $14.00 per month. At each dollar interval in that range, the ratio of HBO subscribers to total basic subscribers was calculated for all systems offering HBO at a price in that range. For instance, among systems offering HBO for $8.00-$9.00, 21.5 percent of total basic subscribers were also HBO subscribers. Across different dollar price intervals, the percentage of basic subscribers taking HBO, or the "take rate," reached a low of 20.2 percent and a high of 23.4 percent. The average take rate among subscribers in all systems pricing in the $8.00-$14.00 range was 21.7 percent, at an average price of $11.47.
- Again, ninety-three percent of Showtime subscribers pay between $7.00 and $14.00 per month. Across different dollar price intervals, the Showtime take rate ranged between 9.5 percent and 22.9 percent. The average take rate among subscribers in all systems pricing in the $7.00-$14.00 range was 10.6 percent, at an average price $10.95.
- Ninety-five percent of Cinemax subscribers pay between $7.00 and 14.00 per month. Across different dollar price intervals, the Cinemax take rate ranged between 9.2 percent and 11.4 percent. The average take rate among subscribers in all systems pricing in the $7.00-$14.00 range was 10.3 percent, at an average price of $10.84.

Care must be taken in applying even these limited conclusions to the likely prices and take rates for basic cable networks if they were to be sold à la carte. The numbers of consumers that choose to subscribe to a premium service will depend not only on the price of the service, as just discussed, but also on the price and availability of other alternative programming. Extrapolating these results to

basic networks also requires that account be taken of the differences in programming genre on premium networks (principally recent movies and original programming) and programming on basic networks (either general interest or niche programming). Additionally, the premium networks do not rely on any advertising revenue, and subscribers pay a higher fee because of this. One also has to control for the quality of the programming.

In sum, the available evidence is not sufficient, even leaving aside the general disequilibrium into which the entire industry would be thrown, to predict the demand for individual channels in a pure à la carte world. It does seem reasonable to expect, however, that there will be a decrease in the number of subscribers to any current network. Moreover, the number of subscribers that a network retains is likely to be correlated with the number of households currently viewing the network.

Appendix C



The Impact of A la Carte Pricing On Multichannel Video

July 2004

Showtime Networks Research & Analysis

Summary

- ***Up to $60 billion*** per year in incremental transactional and related marketing costs would be incurred by programmers in an a la carte pricing scenario
- A la carte pricing requires tremendous transactional marketing* in order to attract and retain subscribers

* For the purposes of this discussion, transactional marketing is defined as a program of tactics, activities and resources designed to generate subscriptions to an a la carte network by stimulating consumer demand and influencing consumer choice at the point of sale. These tactics include, but are not limited to, consumer rebates, free previews, promotional offers, telemarketing, direct mail, customer contact personnel (CCP) sales incentives, CCP trainings and awareness tools, and distributor incentives to favorably price, package and promote the network such as penetration discounts, retail price incentives, cash marketing support.

Premium Business Overview

- There are three companies in the premium category
  - Showtime Networks Inc. (Showtime, The Movie Channel)
  - Home Box Office, Inc. (HBO, Cinemax)
  - Starz Encore Group LLC (Starz)
- Annual premium retail revenue for cable and DBS is $8.2 billion
- Total premium households in cable and DBS is 31.2MM
  - Among the five premium services, there are 74.4MM premium units
- As an a la carte video service, premium is much more 'transactional' than basic cable
  - Requires significant marketing and operational support*

* Transactional marketing as defined on previous page, plus related sales organization, business operations/finance infrastructure.

Source: Premium and household and unit estimates from Kagan Research, LLC, 4/04, Nielsen Homevideo Index, 11/03; revenue estimates from Deustche Bank, 3/04 and 5/04.

Annual Premium Category Connects & Marketing

Cable & DBS Total Premium Households (December 2003)	31.2MM
Average Monthly Household Churn Rate	5.9%
Annual Premium Household 'Replacement' Connects Required *Just to Stay Even*	**22.1MM**
Annual Premium Unit 'Replacement' Connects Required *Just to Stay Even*	**41.6MM**
Annual Premium 'Transactional' Marketing Expense	$240.4MM
Annual Premium Addl. Marketing Expense	$227.9MM
Total Annual Premium Sales, Marketing & Advert Expense	**$468.3MM**
Average Cost per Unit Connect	$11.25

Source: Third party public filings and equity research reports; churn and connect estimates derived from SNI Sales & Marketing analysis; Kagan Research, LLC premium HH estimates; Nielsen Homevideo Index, 11/03.

Additional Costs From Making All Video Services Available A la Carte

For Programmers:

- Reduced advertising revenue
- More branding/advertising required
- Higher programming investment
- Greater costs and complexity associated with
  - Subscriber reporting administration
  - Collections and accounting
  - Affiliate auditing
- Additional Sales personnel and corresponding increase in overhead required
- Training costs for Sales Personnel
- Transactional marketing expenses

Additional Costs From Making All Video Services Available A la Carte

For Distributors:

- Digital set-top box required for every TV
- Billing system upgrades
- Signal transmission/bandwidth management inefficiencies
- Higher license fees from programmers
- Reduced local advertising revenue
- Capital investment in new Call Center facilities
- Training costs for Customer Contact Personnel (CCP)
- More phone time per call for CCP
- More customer confusion and dissatisfaction

Basic Networks Could Incur up to $300MM in Annual Transactional and Related Marketing Expense, Which is Not Currently Part of Their Operating Budget

Estimated Additional Costs with Total A la Carte Pricing
(based on the current Premium business)

For A Typical* Network

	Current	A la Carte
Average Annual Connects	17.8MM	17.8MM
Average Cost Per Connect	$11.25	$16.90
Annual Transactional & Related Marketing Expense	$200.3MM	$300.8MM

* Connect volume is based on a network with 25% subscriber penetration of multichannel video universe. Increased cost per connect estimate derived from SNI analysis; cost may vary.

What Would Consumers Have to Pay?

Building on Bear Stearns' analysis, we have added transactional marketing costs to the impact of a la carte on the estimated cost to consumer. In this case, in order to preserve current revenue, TBS might cost as much as $5.20 if its penetration dropped to 25% in an a la carte scenario.

($ and subscribers in millions, except per subscriber data)	TBS*			
		Take Rate		
	Current	75%	50%	25%
Subscribers	88.6	66.5	44.3	22.2
Subscription Revenue	$252	$252	$252	$252
Advertising Revenue	553	507	461	415
Incremental Subscription Fee from Loss of Advertising (1)	0	46	92	138
Total Subscription and Advertising Revenue	$805	$805	$805	$805
Increase in Transactional Mktg Costs	0	$904	$602	$301
Monthly Wholesale Subscription Fee per Sub to maintain Subscription Revenue	$0.24	$0.32	$0.47	$0.95
Monthly Incremental Subscription Fee from Loss of Advertising	0	0.06	0.17	0.52
Monthly Incremental Subscription Fee from Increase in Mktg Costs	0.00	1.13	1.13	1.13
New Monthly Wholesale Subscription Fee per Subscriber	$0.24	$1.51	$1.78	$2.60
Estimated Cost to Consumer (2)	$0.47	$3.02	$3.56	$5.20

* TBS was selected as one of the five network examples Bear Stearns analyzed for illustrative purposes. (1) Bear Stearns assumes 33% of the subscriber reductions impact ad revenue (i.e., a 50% take rate would translate into a 16.7% reduction in ad revenue). (2) SNI assumes a 50% gross margin on the wholesale subscription fee for the cable operator (i.e., a 100% mark-up to the wholesale cost).

Source: Bear Stearns & Co., Inc. *A La Smart?*, March 29, 2004, plus SNI analysis of transactional marketing costs.

What Would Consumers Have to Pay?

Building on Bear Stearns' analysis, we have added transactional marketing costs to the impact of a la carte on the estimated cost to consumer. In this case, in order to preserve current revenue, ESPN might cost as much as $18.77 if its penetration dropped to 25% in an a la carte scenario.

	ESPN*			
($ and subscribers in millions, except per subscriber data)		Take Rate		
	Current	75%	50%	25%
Subscribers	88.7	66.5	44.4	22.2
Subscription Revenue	$2,012	$2,012	$2,012	$2,012
Advertising Revenue	737	676	614	553
Incremental Subscription Fee from Loss of Advertising (1)	0	61	123	184
Total Subscription and Advertising Revenue	$2,749	$2,749	$2,749	$2,749
Increase in Transactional Mktg Costs	0	$904	$603	$301
Monthly Wholesale Subscription Fee per Sub to maintain Subscription Revenue	$1.89	$2.52	$3.78	$7.56
Monthly Incremental Subscription Fee from Loss of Advertising	0	0.08	0.23	0.69
Monthly Incremental Subscription Fee from Increase in Mktg Costs	0.00	1.13	1.13	1.13
New Monthly Wholesale Subscription Fee per Subscriber	$1.89	$3.73	$5.15	$9.38
Estimated Cost to Consumer (2)	$3.78	$7.46	$10.29	$18.77

* ESPN was selected as one of the five network examples Bear Stearns analyzed for illustrative purposes. (1) Bear Stearns assumes 33% of the subscriber reductions impact ad revenue (i.e., a 50% take rate would translate into a 16.7% reduction in ad revenue). (2) SNI assumes a 50% gross margin on the wholesale subscription fee for the cable operator (i.e., a 100% mark-up to the wholesale cost).

Source: Bear Stearns & Co., Inc., *A La Smart?*, March 29, 2004, plus SNI analysis of transactional marketing costs.

Estimated Additional Costs with Total A la Carte Pricing (based on the current Premium business)

For Distributors

	A la Carte	Increase
Annual Video Installs/Disconnects	51.4MM	N/C
Annual Video 'Service Adjustments'*	38.6MM	22.2MM
Annual CCP Phone Hours Required	5.2MM	4.1MM
Annual CCP Expense	$244.0MM	$128.0MM

* Service adjustments are changes to existing premium or digital service subscription, such as adding services, dropping services, or substituting one service for another. A la carte is projected to increase the complexity and duration of service adjustment phone calls, as consumers inquire about their new options, and evaluate cost savings with more extensive assistance from CCP.

Source: SNI Sales & Marketing analysis; CCP phone expense averages from 2003 CCP industry conference guide.